

CLAIMS

1. A superantigen selected from any one of SMEZ-2, SPE-G, SPE-H and SPE-J, or a functionally equivalent variant thereof.
2. A superantigen which is SMEZ-2 and which has an amino acid sequence of SEQ ID NO. 2, or a functionally equivalent variant thereof.
3. A superantigen which is SPE-G and which has an amino acid sequence of SEQ ID NO. 4, or a functionally equivalent variant thereof.
4. A superantigen which is SPE-H and which has an amino acid sequence of SEQ ID NO. 6, or a functionally equivalent variant thereof.
5. A superantigen which is SPE-J and which has an amino acid sequence which includes SEQ ID NO. 8, or a functionally equivalent variant thereof.
6. A polynucleotide comprising a nucleotide sequence encoding SMEZ-2 or a variant thereof as claimed in claim 2.
7. A polynucleotide according to claim 6 in which said nucleotide sequence is or includes SEQ ID NO. 1.
8. A polynucleotide comprising a nucleotide sequence encoding SPE-G or a variant thereof as claimed in claim 3.
9. A polynucleotide according to claim 8 in which said nucleotide sequence is or includes SEQ ID NO. 3.
10. A polynucleotide comprising a nucleotide sequence encoding SPE-H or a variant thereof as claimed in claim 4.
11. A polynucleotide according to claim 10 in which said nucleotide sequence is or includes SEQ ID NO 5.

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Sub 3

13. A polynucleotide according to claim 12 in which said nucleotide sequence includes SEQ ID NO. 7.

15. A method of subtyping Streptococci which includes the step of detecting the presence or absence of a polynucleotide as claimed in any one of claims 6, 8, 10 or 12.

17. A construct according to claim 16 in which said cell-targeting molecule specifically binds a tumour cell.

19. A pharmaceutical composition which includes a construct as claimed in claim 16.

21. An antibody which binds superantigen SPE-G as claimed in claim 3.

23. /An antibody which binds superantigen SPE-J as claimed in claim 5.

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Sub C3

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Sub
PGB

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Sub C31

30. A method of diagnosing a disease which is caused or mediated by expression of a superantigen as claimed in claim 1 which includes the step of detecting the presence of said superantigen using an antibody which binds superantigen SMEZ-2, SPE-G, SPE-H or SPE-J, or detecting the presence of a polynucleotide encoding said superantigen using a nucleic acid molecule which hybridises to a polynucleotide comprising a nucleotide sequence encoding SMEZ-2 which is or includes SEQ ID No. 1, a nucleotide sequence encoding SPE-G which is or includes SEQ ID No. 3, a nucleotide sequence encoding SPE-H which is or includes SEQ ID No. 5, or a nucleotide sequence encoding SPE-J which is or includes SEQ ID No. 7.

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